

3415

U. S. G. S. SURVEY.
BRARY AND GEODETIC SURVEY
Acc. No.

Hyd. Chart No. 1822-2

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: *Pa*

DESCRIPTIVE REPORT.

Hyd. Sheet No. *3415*

LOCALITY:

Chesapeake Bay Entrance

1902

CHIEF OF PARTY:

H. C. Hodgkins

3415

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DEPARTMENT OF COMMERCE AND LABOR.

C. & G. SURVEY,

LIBRARY AND ARCHIVES

FEB 20 1913

COAST AND GEODETIC SURVEY. Sec. No

O. H. TITTMANN, SUPERINTENDENT.

• HYDROGRAPHY

CHESAPEAKE BAY ENTRANCE

~~VICINITY OF REPORTED DANGER.~~

C. & G. S. S. BACHE.

W. C. HODGKINS, CHIEF OF PARTY.

Begun Dec. 14, 1912. also August 26, 1913

Ended Dec. 17, 1912. " October 28, 1913

Scale 1:40000

Tide Staff at

Cape Charles Quarantine.

Positions platted by L. A. Potter.

DESCRIPTIVE REPORT

to accompany Hydrographic Sheet No. 3415
Chesapeake Bay Entrance, Virginia.

Scale 1:40000

C. & G. SURVEY,
LIBRARY AND ARCHIVES
FEB 20 1913
Acc. No

Surveyed in December, 1912,

by the party on the Steamer BACHE

under the command of Assistant W. C. HODGKINS.

This survey was made in pursuance of Paragraph 3 of orders dated July 25, 1912, in which it was stated that the Virginia Pilots Association had reported a 17-foot lump 3 miles N. by E. $\frac{3}{4}$ E. from Cape Henry. An examination of the locality, at the first opportunity, was directed.

It was further stated that the Virginia Pilots Association had promised to place a buoy on the lump.

On July 29, 1912, I wrote to the president of the Virginia Pilots Association from Brunswick, Georgia, informing him that I expected to reach Chesapeake Entrance about the middle of August and asking him to have the buoy placed before that time. His reply was to the effect that this would be done.

However, no such buoy was ever seen by anyone on the BACHE and I was unofficially informed that the pilots were unable to find the lump.

The bad condition of the main boiler of the BACHE led to her being sent to Boston for repairs before doing any work in this region.

Orders dated October 28, 1912, directed, among other things, that an early opportunity should be taken to carry out the instructions of July 25, in regard to the examination of this locality.

On account of the lateness of the season a good deal of trouble was experienced from stormy and foggy weather, but on three days, December 14, 16, and 17, 1912, 47 miles of sounding lines were run in the vicinity of the reported danger, and 655 soundings were made without finding any indication of it.

Bad weather following, it was thought inadvisable to make further search at that time of year.

The sheet was projected with the view of allowing further work, if desired, in any part of the entrance.

Respectfully submitted

W. C. Hodgkins

Chief of Party.

To the Superintendent,

Coast and Geodetic Survey,

Washington, D. C.

February 14, 1913.

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U. S. C. & G. SURVEY,
LIBRARY AND ARCHIVES
FEB 20 1913
Acc. No.

Statistics of Hydrographic Sheet No. 3415

Scale 1:40000.

Chesapeake Entrance, Vicinity of Reported Danger.

Date. 1912	Vol.	Letter.	Miles	Sound'gs.	Angles.	Positions	Boat
Dec. 14	1	A	17.27	221	128	64	BACHE
" 16	1	B	3.68	33	22	11	"
" 17	1	C	26.48	401	244	122	"
Total:	1	3	47.43	655	394	197	BACHE.

MAR 13, 1913

HYDROGRAPHIC SHEET 3415.

Chesapeake Bay Entrance, Virginia, by Asst. W. C.
Hodgkins in 1912.

TIDES.

	Cape Charles Quarantine ft.
Mean low water, or plane of reference on staff	3.4
Lowest tide observed " "	2.2
Highest tide observed " "	8.4
Mean range of tide	2.8

Coast and Geodetic Survey

MAR 13 1913

TIDAL DIVISION

Hyd. Sheet No. 3415.
"Chesapeake Bay Entrance"

The positions for the work on this sheet were plotted by the "Field party" and have been taken as correct being verified only when necessary to reconcile a position which was necessary in numerous instances as the positions were designated only in pencil and had become erased to the extent as to be not easily made out, or to verify a line which appeared in error.

The work is good and indicates thoroughness; The lines are closely run and soundings sufficiently close to develop the bottom with a degree of accuracy.

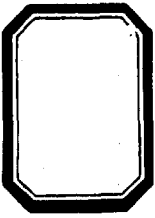
Where cross lines are run the cross soundings coincide closely although about 2 feet difference exist in some instances, this can probably be accounted for by conditions of wind and water at time of run.

As stated in "Descriptive Report" the reported "17 ft lump about 3 miles N by $E \frac{3}{4}$ East of Cape Henry" does not develop although this locality was closely sounded.

The records are in good condition and none for if any indefinite condition.

John D. Torrey
4/7/14.

Plotted in feet.



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C. & G SURVEY,
LIBRARY AND ARCHIVES
NOV 18 1913
Acc. No. _____

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

Superintendent.

State: _____

DESCRIPTIVE REPORT.

Hyd. Sheet No. **3415** (Additional work)

LOCALITY: _____

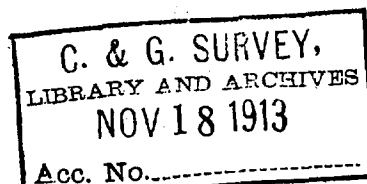
1913

CHIEF OF PARTY:

H. C. Hodgkins
11-4045

3415

DESCRIPTIVE REPORT



relative to additional work on Hydrographic Sheet 3415

Chesapeake Bay Entrance, Virginia,

Scale 1:40000

Executed in August, September, and October, 1913,

by the party on the Steamer BACHE

under the command of Assistant W. C. Hodgkins.

In pursuance of orders dated July 17, 1913, a careful development of the comparatively shoal bank northward of the main ship channel close to Cape Henry, for the purpose of ascertaining the deepest draft which can be safely taken across the bank, was taken up by the party on the BACHE as soon as the vessel reached the Chesapeake after completing repairs at Boston.

This work was begun on August 8 by the establishment of a tide gauge at the wharf of the Cape Charles Quarantine Station on Fisherman's Island. The staff was connected by spirit levels with the benchmarks at that station and with several additional benchmarks established to lessen the risk of losing the tide plane at that station.

On account of the great difficulty of fixing positions while sounding which had been experienced during previous work in this locality, due to the width of the entrance and to the frequently hazy condition of the air, it was thought desirable to build a water signal on the "Middle Ground" shoal for use as the "middle object" in the sextant observations; and the erection of this signal was the first work undertaken after getting the tide gauge established.

Bad weather and rough water seriously retarded the progress of the work and it was not until August 19 that the foundation piles for the signal could be driven. On that day, three forty-foot piles were sunk to a depth of twelve feet in the sand on the Middle Ground but it was three days later before the sea was smooth enough to permit boats to be lowered to work upon the superstructure of the signal.

On the following day, August 23, the vessel was visited by the Assistant Secretary of Commerce and the Superintendent of the Coast and Geodetic Survey, who came on board at Hampton Roads and proceeded in the ship to inspect the work in the entrance to the bay.

The weather was unfavorable for field work, being thick and windy with a moderately heavy sea running, but a short line of soundings was run to illustrate the method of work; after which the ship proceeded to an anchorage in East River, Mobjack Bay, and on the following day returned by way of Yorktown to Hampton Roads, where the visiting officials left the BACHE on their return to Washington.


The hydrography of the entrance was advanced as continuously and as rapidly as was permitted by the weather, which continued very hazy and windy. The new signal, built as described, with considerable trouble and delay, had been in use only a few days when it was totally destroyed by the very severe storm which swept the southern coast on September 2 and 3 and, considering the unpropitious conditions, it was thought best not to attempt to rebuild it though its loss was a serious detriment to the work in hand.

With occasional exceptions, the weather continued to give trouble throughout September and October and on many occasions when work was attempted it became necessary to stop on account of the signals being obscured by haze or fog or because the water became too rough for good work.

But toward the end of October, the area enclosed by the parallels of 36 57' and 37 03' and by the meridians of 75 49' and 76 00' had, in the opinion of the commanding officer, been sufficiently developed and work was closed for the season on October 28.

The statistics are given on a separate sheet.

Respectfully submitted,



Chief of Party

To the Superintendent
of the Coast and Geodetic Survey,
Washington, D. C.

November 13, 1913.

Statistics of work done in 1913

on Hydrographic Sheet No. 3415

Scale 1:40000

Chesapeake Entrance, Virginia

Date 1913	Letter	Vol.	Miles	Soundings	Angles	Positions	Boat used
Aug. 26	A	1	15.00	401	202	101	BACHE
" 29	B	1	46.75	1008	340	170	"
" 30	C	1 & 2	22.45	492	168	84	"
			5.75	88	32	16	"
Totals for August			89.95	1989	742	371	
Sept. 6	D	2	31.09	656	238	119	BACHE
" 13	E	2	4.84	120	34	17	"
" 18	F	2	15.55	403	142	65	"
" 19	G	2	25.33	564	190	95	"
"	G	3	7.58	168	60	30	"
" 22	H	3	7.59	145	75	25	"
" 23	I	3	54.12	1143	507	196	"
" 24	K	3	18.27	422	158	73	"
"	K	4	16.70	360	132	66	"
" 25	L	4	40.30	936	310	155	"
" 26	M	4	31.67	780	256	128	"
"	M	5	11.15	258	88	44	"
Totals for September			264.49	5965	2190	1013	
Oct. 1	N	5	11.00	330	114	57	BACHE
" 2	O	5	9.00	212	90	39	"
" 8	P	5	6.80	203	72	36	"
" 9	Q	5	4.00	59	18	9	"
" 14	R	5	21.07	475	182	91	"
" 16	S	5	10.36	186	76	38	"
"	S	6	32.24	660	232	116	"
" 17	T	6	45.37	990	350	175	"
" 18	U	6	9.21	168	58	29	"
" 22	V	7	32.82	705	284	142	"
" 23	W	7	46.06	1098	380	190	"
" 27	X	8	39.15	871	330	164	"
" 28	Y	8	32.24	708	272	136	"
Totals for October			299.32	6665	2458	1222	
GRAND TOTAL		8	653.76	14619	5390	2606	24 days work

Chief of Party

W. C. Hodgkins